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Attachment 5 to PRDA 04-01-PKT:

AFRL/PRSS Electric Propulsion Facilities and Capabilities

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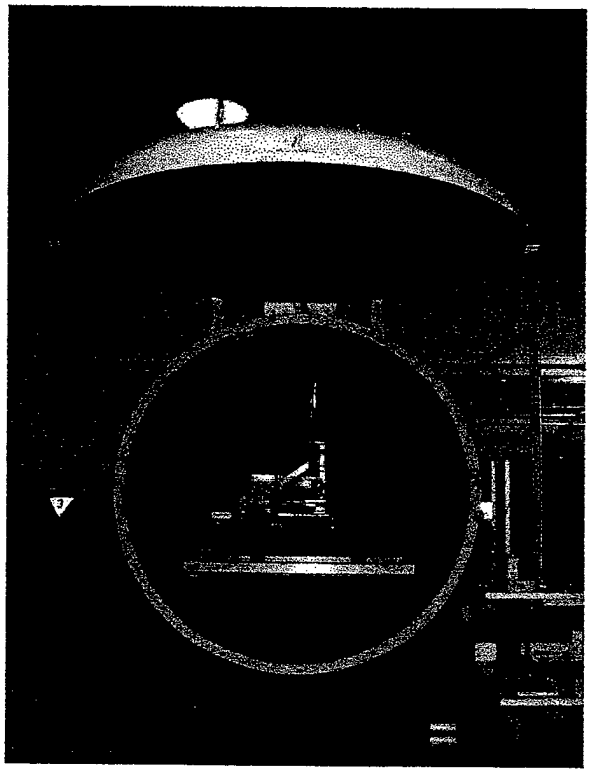
Laboratory Capabilities:
Electric propulsion development

Chamber 2:

- micro-Newton thrust stand
  - Range: 10 micro-N to 200 micro-N
- Fully automated thruster operation
- Complete data acquisition system
- 2.8 m diameter, 4 m length
- Pumping speed 9,000 l/s (Xe)
  - Two 60 cm diffusion pumps
  - Large mechancial pump train
  - Base pressure: 1×10^{-6} torr

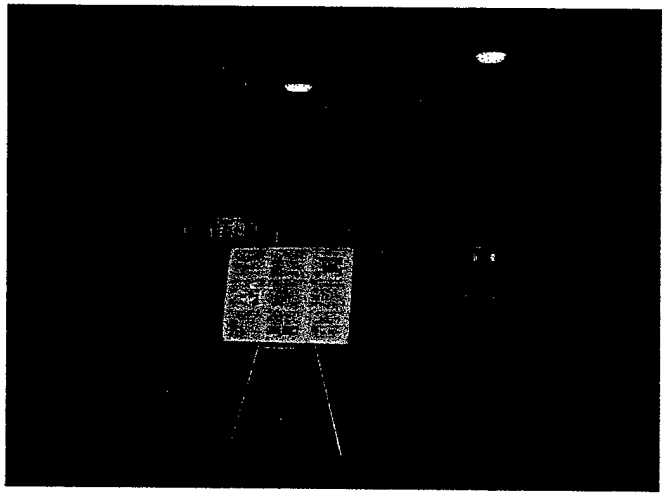


USED FOR: PPT's, micro-PPT's, small Hall effect thrusters

Laboratory Capabilities:
Electric propulsion development

Chamber 3:

- **milli-Newton thrust stand**
  - **Range: 0.01 N to 1 N**
- **Fully automated thruster operation**
- **Complete data acquisition system**
- **3.2 m diameter, 10 m length**
- **Pumping speed 135,000 l/s (Xe)**
  - **Cyrogenic panels**
  - **Base Pressure: $1x10^{-7}$ torr**

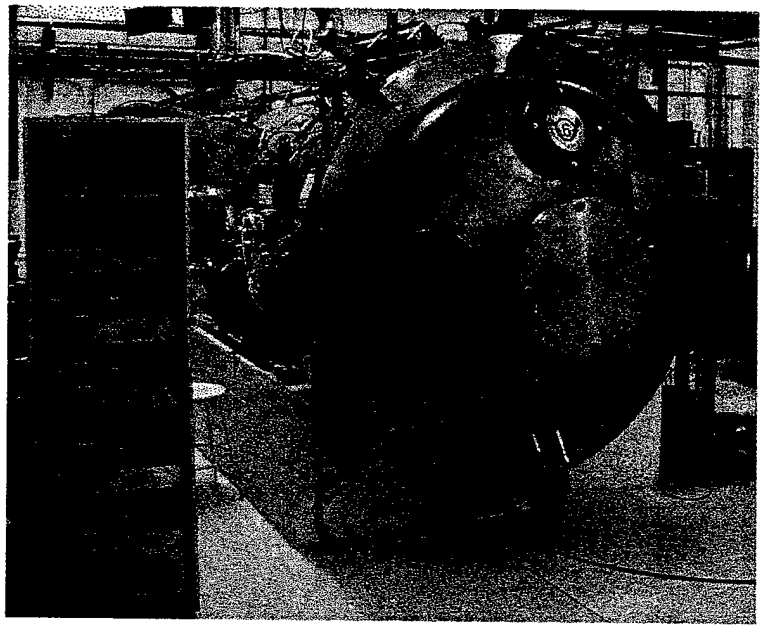


USED FOR: large Hall effect thrusters

Laboratory Capabilities:
Electric propulsion development

Chamber 6:

- **Partially automated thruster operation(s)**
- **Complete data acquisition system**
- **1.8 m diameter, 3 m length**
- **Pumping speed 32,000 l/s (Xe)**
  - **Cryogenic panels**
  - **Base pressure range: $1x10^{-7}$ torr**

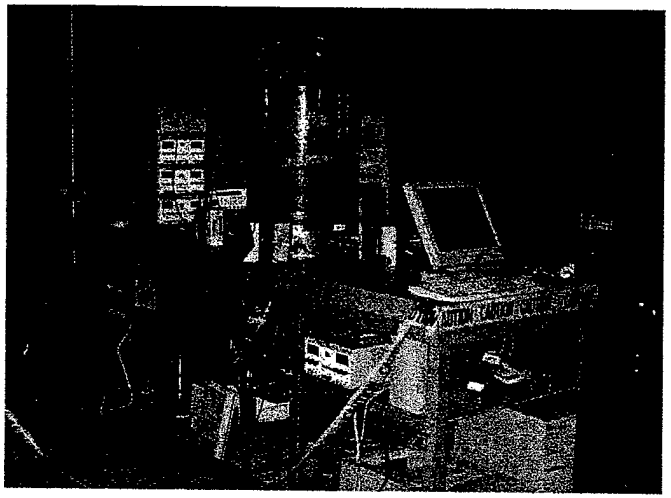


USED FOR: low to mid power Hall thrusters

Laboratory Capabilities:
Electric propulsion development

Chambers 8, 9 and 10:

- **Fully automated thruster operation(s)**
- **Complete data acquisition system**
- **0.5 m diameter, 1 m height**
- **Pumping speed 300 l/s (N_2)**
  - **15 cm turbomolecular pump**
  - **Base pressure range: $1x10^{-6}$ torr**



USED FOR: micro-PPT's, cathodes